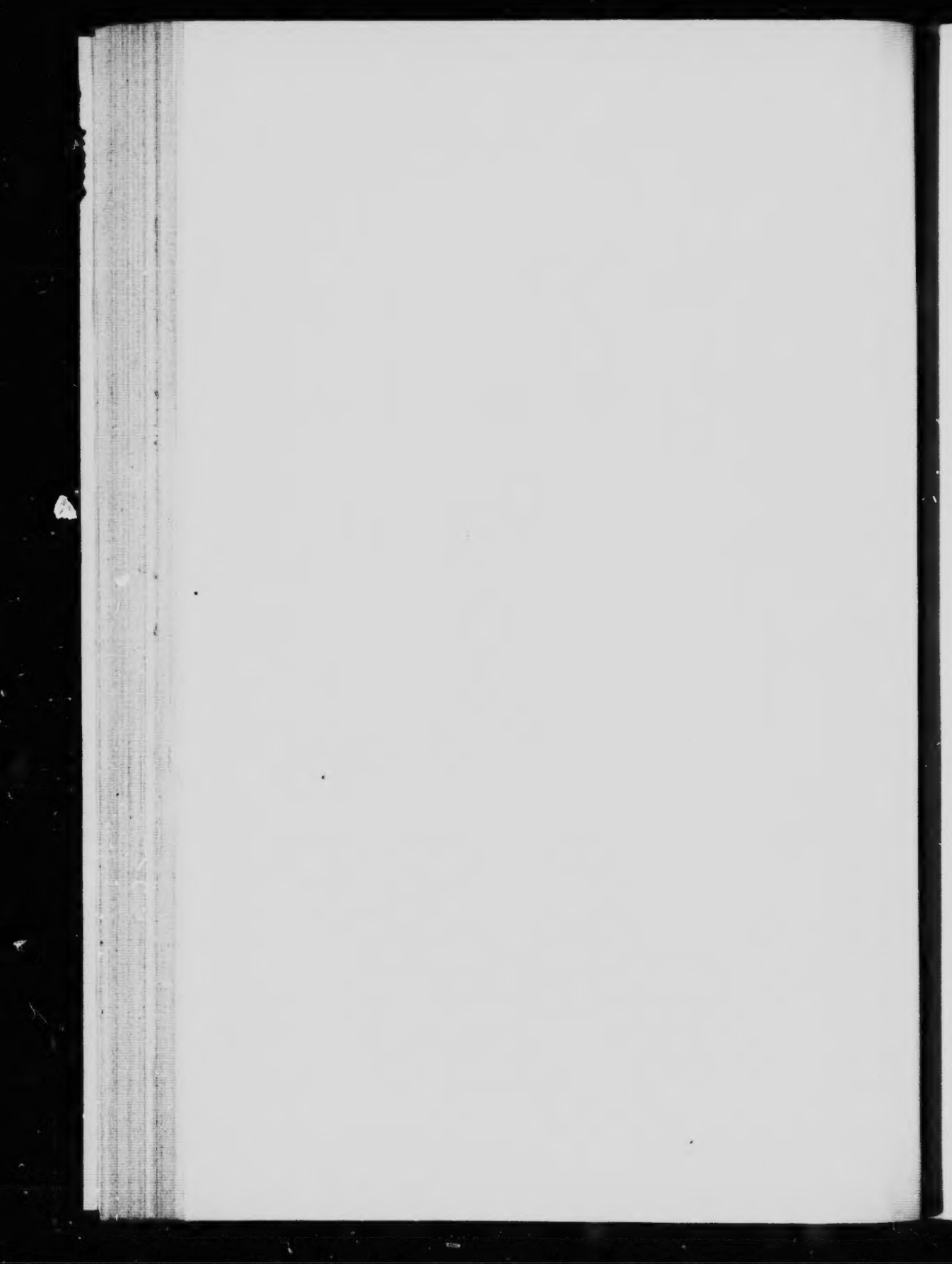




LABORATORY
OF THE
INLAND REVENUE DEPARTMENT

OTTAWA, CANADA.

BULLETIN No. 284

ARSENATE OF LEAD.

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ARSENATE OF LEAD

OTTAWA, March 27, 1914.

WM. HIMSWORTH, Esq.,
Deputy Minister, Inland Revenue.

SIR,—I have the honour to submit herewith a report upon eighty-two sample purchased as Arsenate of Lead in June, July and August of last year.

Consequent upon many complaints regarding the character of this article as offered on the Canadian markets, a collection of 26 samples was made in 1910 (see Bulletin No. 205).

Upon the work then done, and further study of the subject, the following standards were recommended and are incorporated into the fourth schedule to the Adulteration Act, by an amendment dated June 6 1913.

- ARSENATE OF LEAD.—1. An insecticide, containing at least 48 per cent of its weight of solids as a residue when dried to constant weight on the steam bath; and these solids must essentially consist of the pentoxide of arsenic in combination with the monoxide of lead. Water-soluble arsenic (expressed as the tri-oxide of arsenic) must not be present to more than one per cent of the weight of the insecticide as sold.
2. Arsenate of lead shall be regarded as adulterated if any substance has been mixed or packed with it so as to reduce, lower or injuriously affect its quality or strength.

The results obtained by analysis of the 82 samples now reported must be judged in accordance with the legal standards quoted.

The great majority of these samples are sold in the form of a paste, this being the form in which the article is most readily available for use as a spray. In order that the article may not dry out on the shelves of the dealer, it is usually put up in glass or tin containers, and hermetically sealed. Forty-one (41) samples of this collection were furnished to the analyst in the original container, and these are specified in the table. The remainder were furnished in glass bottles or in tins which had been filled by our inspectors from the larger packages of the dealer. Owing to the great difficulty of sampling a paste of this kind, some uncertainty attaches to the determination of the water content

n these cases ; and where the containers used by our factors have been imperfectly closed, more or less loss of moisture occurs during storage in the interval between collection and analysis. Indeed many of the samples, as packed by the manufacturer, showed clearly that loss of water had occurred through imperfect sealing. Some of these, put up in tin containers, showed the tin rusted quite through, and the contents dry. This was particularly the case with sample 54148. In spite of these imperfections, a sufficient number of samples, (more than 30) were received in such good condition as to justify the conclusion that, so far as content of solid matter is concerned, the manufacturers of Arsenate of Lead endeavour to meet the requirements of the legal definition.

Water soluble arsenic varies considerably, but in no case does it reach anything like the permitted limit.

With regard to the content of Arsenate of Lead in Arsenic Acid and Oxide of Lead, which are the active ingredients of this insecticide, the following work reported by the New Jersey Experiment Station (Bulletin No. 222) is important. "Arsenate of Lead is prepared by the action of Lead Acetate or Lead Nitrate on Di-Sodium Arsenate. Using pure chemicals the product prepared from the Acetate contains theoretically 74.40 per cent of Oxide of Lead and 25.60 per cent of Arsenic Anhydride. At a conference of manufacturers and entomologists a standard agreed upon was that Lead Arsenate should contain not over 50 per cent water, and not less than 12.5 per cent. Arsenic Anhydride. Fifteen samples of the commercial article gave the following results, calculated to a dry basis :—

Arsenic Anhydride.....	17.94 to 33.30 per cent.
Lead Oxide.....	62.48 to 70.63 "

The great difference noted between theoretical composition and the composition of the manufactured article is due to the formation of basic salts whose amount and character vary with the method of manufacture, the mixtures of salts at different stages of the process determining (along with temperature and other conditions) the establishing of equilibria, which change with every change in the conditioning. It will be noted that the Canadian article, shows a greater uniformity and a nearer approximation to theoretical requirements than the samples analyzed at the New Jersey Station.

The results now placed on record indicate that this article, as offered for sale in Canada, is of very satisfactory character.

I beg to recommend publication of this report as Bulletin No. 284.

I have the honour to be, Sir,
Your obedient servant,

A. MCGILL,
Chief Analyst.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA

1913.							
July 8	Arsenate of Lead.	54142	National Drug Co., Halifax, N.S.	3lbs.	65	Unknown	N. D. & C. Co. Montreal.
" 15	"	54143	J. A. Craig, Yarmouth, N.S.	3 "	90	Canada Paint Co., Montreal.	Canadian Drug Co., St. John, N.B.
" 16	"	54144	T. L. Harvey, Wolfville, N.S.	1½ "	Nil	Vendor	
" 16	"	54145	W. W. Rockwell, Kentville, N.S.	3 "	25	Corona Chem. Co., Newark, N.J.	Manufacturers...
" 17	"	54146	Wilcox Bros., Windsor, N.S.	1½ "	20	Canada Paint Co., Montreal.	"
" 17	"	54147	F. H. Manning, Falmouth, N.S.	1½ "	20	Merrimac Chem. Co., Boston.	Capt. Allen, Kentville, N.S.
" ..	"	54148	Halifax Seed Co., Halifax, N.S.	3 "	75	May & Baker, London, Eng.	E. B. Sutcliffe, Halifax, N.S.
" 24	"	54149	E. G. Moxon, Truro, N.S.	1 "	25	Chemical Laboratories, Ltd.	N. D. & C. Co., Halifax, N.S.
" 25	"	54150	G. J. Kinley, Lunenburg, N.S.	3 "	75	"	"
" 28	"	54151	Brown Bros., Halifax, N.S.	3 "	75	N. D. & C. Co., Halifax.	"

DISTRICT OF NEW BRUNSWICK--

June 20	Arsenate of Lead.	50652	The Nat. Drug & Chem. Co., Ltd., St. John, N.B.	3lbs.	75	Dow Chem. Co., Midland, Mich.	
" 24	"	50653	W. H. Thorne Co., Ltd., St. John, N.B.	3 "	75	The Grasselli Chem. Co., Cleveland, Ohio.	
" 25	"	50654	P. Nase & Son, St. John, N.B.	3 "	75	The Canada Paint Co., Ltd., Montreal	
" 26	"	50655	The Canadian Drug Co., Ltd., St. John, N.B.	3 "	75	"	
July 8	"	50656	J. S. Neill & Son, Fredericton, N.B.	3 "	75	"	
" 8	"	50657	R. H. Mack, St. John, N.B.	3 "	75	"	The Nat. Drug & Chem. Co., Ltd., St. John, N.B.
" 11	"	50658	Wade Drug Co., Perth, N.B.	3 "	75	The Canada Paint Co., Montreal.	
" 24	"	50659	Dickison & Troy, New-castle, N.B.	3 "	75	"	Nat. Drug & Chem. Co., Ltd., St. John, N.B.
" 25	"	50660	J. D. B. F. Mackenzie, Chatham, N.B.	3 "	95	Sherwin-Williams Co., Ltd., Montreal	

LEAD ARSENATE.

Inspector's Report. (Is not an expression of Opinion.	Moisture in Sample as received.	Results of Analysis.							Analysis made on original package.	No. of Sample.	Remarks and Opinion of the Chief Analyst.	
		Results calculated on the dry sample.						Percentage Weights in Original Sample.				
		Total Arsenic as As ₂ O ₅ .	Total Lead as Pb. O.	Water Soluble Solids.	Water Soluble Arse- nic as As ₂ O ₅ .	Water Soluble Lead as Pb. O.	Im- purities.	Arsenic (As ₂ O ₅)				Lead (Pb. O.)

R. J. WAUGH, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	41.27	28.75	66.59	1.50	12.00	0.60	1.38	16.87	39.11	No.	54142	
.....	36.16	27.31	71.56	1.00	12.00	0.36	0.52	17.44	45.68	Yes.	54143	
.....	44.48	30.19	64.38	6.00	0.72	0.72	4.56	16.75	35.75	No.	54144	
Labelled Powdered Arsenate of Lead	0.20	31.62	65.30	0.50	12.00	0.18	0.20	.....	.....	No.	54145	
.....	29.08	30.19	67.14	2.00	12.00	0.18	1.70	21.71	48.29	No.	54146	
Labelled Swift's Arsenate of Lead	35.54	28.75	69.35	2.00	12.00	0.18	1.70	18.53	44.70	No.	54147	
.....	0.80	25.88	69.53	2.00	12.00	0.00	1.88	.....	.....	Yes.	54148	Tin container rusted through
"Vanco" Brand..	42.52	31.90	61.26	1.50	12.00	0.00	1.38	18.34	35.21	Yes.	54149	
"....."	45.05	28.75	68.98	1.50	12.00	0.18	1.20	15.80	37.90	Yes.	54150	
.....	44.50	31.07	66.22	2.00	0.24	0.00	1.76	17.25	36.75	No.	54151	

J. C. FERGUSON, INSPECTOR.

.....	49.16	31.62	65.49	1.00	0.24	0.18	0.58	16.07	33.50	Yes.	50652	
.....	43.65	27.31	69.90	1.00	0.24	0.18	1.58	15.39	39.39	Yes.	50653	
.....	47.05	25.88	71.92	1.50	12.00	0.18	1.20	13.71	38.08	Yes.	50654	
Specially prepared for C. D. Co., Ltd.	43.64	25.15	72.11	2.00	12.00	0.36	1.52	14.13	40.64	Yes.	50655	
.....	47.80	23.00	72.66	3.00	12.00	0.36	2.52	11.96	37.86	Yes.	50656	
"Vanco" Brand..	44.70	27.31	69.13	1.00	12.00	0.00	0.88	15.11	38.23	Yes.	50657	
Neutral Arsenate of Lead.	47.96	25.88	71.00	3.50	0.48	0.36	2.66	13.47	36.95	No.	50658	
Product of Canada Paint Co., Mont- real.	39.55	26.83	68.24	1.50	12.00	0.00	1.38	16.22	41.25	Yes.	50659	
.....	38.72	27.31	71.00	1.00	12.00	0.36	0.52	16.74	43.51	No.	50660	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.
DISTRICT OF QUEBEC—							
1913.							
June 23	Arsenate of Lead.	37075	J. B. Giroux, 385 Rue St. Joseph, Quebec.	3 box's	50	Unknown	J. E. Livernois, Quebec.
" 30	" ..	37076	L. E. Martel, 54 Rue St. Joseph, Quebec.	1 lb ..	45	Canada Paint Ltd., Montreal.	Lymans, Ltd., Montreal.
July 2	" ..	37077	J. E. Livernois, Couillard, St. Jean.	3 lbs..	75	" " ..	Mfrs
" 2	" ..	37078	Dr. Ed Morin, 113 Cote Lamontagne.	3 " ..	75	Lyman Knox, Montreal.	"
DISTRICT OF THREE RIVERS—							
June 24	Arsenate of Lead.	58957	Williams, Three Rivers	6 ozs..	30	Nat. D. & C. Co., Montreal.	.....
" 25	" ..	58958	J. A. Peltier, Three Rivers.	6 " ..	30	" " ..	.....
DISTRICT OF EASTERN TOWNSHIPS—							
July 28	Arsenate of Lead.	1645	H. Neven, St. Cesaire	3 box's	1.20	The Canada Paint Co., Ltd., Montreal.	.....
" 30	" ..	1646	P. H. Hebert, St. Hilaire.	1 jar.	75	The Sherwin-Williams Co., Ltd., Montreal.	.....
DISTRICT OF MONTREAL —							
June 24	Arsenate of Lead.	58701	Dupuy & Ferguson, Jacques Square, Montreal.	3 pks.	1.05	Merrimac Chem. Co., Boston.	.....
" 24	" ..	58702	H. L. Dery, 21 Notre Dame east, Montreal.	3 " ..	1.05	Canada Paint Co ..	.....
" 26	" ..	58703	Wm. Rennie & Co., Ltd., 109 McGill St., Montreal.	3 " ..	1.50	The Grasselli Co., Ltd., Hamilton, Ont.	.....
Aug. 21	" ..	58704	The Canada Paint Co., William St., Montreal.	3 lbs..	75	Vendors .....	.....
" 22	" ..	58705	Nat. Drug & Chem. Co., 34 St. Gabriel St., Montreal.	3 " ..	57	.....	Dow Chem. Co., Midland, Mich.
" 22	" ..	58706	The Lyman Knox Co., 374 St. Paul St., Montreal.	3 " ..	75	Canada Paint Co....	.....
" 27	" ..	58707	Lymans, Ltd., 474 St. Paul St., Montreal.	3 " ..	60	.....	Dow Chem. Co., Midland, Mich.
" 28	" ..	58708	The Dr. Leduc Drug Co., Chaboillez Square, Montreal.	3 " ..	90	.....	Nat. Drug & Chem. Co.

LEAD ARSENATE.

Inspector's Report. (Is not an expression of Opinion).	Results of Analysis.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Moisture in Sample as Received.	Results Calculated on the Dry Sample.						Percentage Weights in Original Sample.		Analysis made on Original Package.		
		Total Arsenic as As ₂ O ₃ .	Total Lead as PbO	Water Soluble Solids.	Water Soluble Arse- nic as As ₂ O ₃ .	Water Soluble Lead as PbO.	Water Soluble Im- purities.	Arsenic (As ₂ O ₃).	Lead (PbO).			
F. X. W. E. BELAND, INSPECTOR.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	No.		
.....	0.40	27.31	70.27	1.00	24.00	0.70				No.	37075	Tin container rusted through.
.....	50.00	27.31	71.00	1.50	12.00	36.10	1.02	13.65	35.50	No.	37076	
.....	0.15	25.88	72.66	1.00	12.00	18.00	0.70	.....	.....	No.	37077	
.....	41.12	27.31	71.00	1.00	12.00	18.00	0.70	16.08	41.90	Yes.	37078	
DR. V. P. LAVALLEE, INSPECTOR.												
.....	29.12	28.03	65.49	1.00	12.00	18.00	0.70	17.73	46.39	No.	58937	
.....	0.15	30.19	66.96	1.00	36.00	18.00	0.46	.....	.....	No.	58938	
J. C. ROULEAU, INSPECTOR.												
.....	40.25	27.31	71.00	0.50	12.00	0.00	0.38	16.32	42.42	Yes.	1645	
.....	46.92	25.88	72.11	1.50	12.00	36.10	1.02	13.74	38.28	No.	1646	
D. J. KEARNEY, INSPECTOR.												
.....	45.26	31.62	65.85	2.00	12.00	18.10	1.70	17.31	36.05	Yes.	58701	
.....	27.85	26.59	71.00	1.50	12.00	0.00	0.00	19.19	51.24	Yes.	58702	
.....	46.53	31.62	65.49	2.50	12.00	36.20	2.02	16.91	35.02	Yes.	58703	
.....	47.79	27.31	70.27	1.50	12.00	18.10	1.20	17.95	36.69	Yes.	58704	
.....	41.39	31.62	64.56	1.00	12.00	18.00	0.70	18.53	57.84	No.	58705	
.....	40.16	25.45	70.67	1.00	12.00	36.00	0.64	15.23	41.33	Yes.	58706	
.....	45.33	30.19	67.69	2.00	12.00	36.10	1.52	16.89	37.01	Yes.	58707	
.....	38.90	30.19	66.96	1.00	12.00	18.00	0.70	18.49	40.91	No.	58708	

BULLETIN, No. 284—

Date of Collections.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF VALLEYFIELD—

1913.							
July 15	Arsenate of Lead.	58051	Besner & Chasle, Valleyfield, P.Q.	3 jars.	75	Canada Paint Co., Ltd.	
" 26	" "	58052	Jas. Fortune, Huntingdon, P.Q.	3 " "	1.20	Sherwin-Williams Co., Ltd.	
" 26	" "	58053	A. Anderson, Herdman, P.Q.	3 " "	1.20	" "	

DISTRICT OF OTTAWA—

July 11	Arsenate of Lead.	59151	F. G. Newman, Byward Market, Ottawa	3 jars.	1.50	Canada Paint Co., Ltd., Toronto.	
" 12	" "	59152	The National Drug & Chemical Co., Ltd., Ottawa.	3 lbs.	75	Vendors.....	
" 12	" "	59153	J. S. Skinner & Son, Wellington St., Ottawa.	1 1/2 "	38		Lymans Ltd., Montreal.
" 14	" "	59154	Standard Drug Co., Rideau St., Ottawa.	3 "	105	Canada Paint Co., Ltd., Toronto.	Drug Trading Co. Toronto, Ottawa Drug Co., Ottawa.
" 14	" "	59155	Harrison's Pharmacy, Rideau St., Ottawa.	1 1/2 "	30		" "
" 14	" "	59156	M. A. Henderson, Bank St., Ottawa.	1 "	25		" "
" 14	" "	59157	F. W. Day, Bank St., Ottawa.	1 "	25	Nat. Drug & Chem. Co., Ltd., Ottawa.	Manufacturers...
" 14	" "	59158	W. J. Graham, Sparks St., Ottawa.	1 1/2 "	40	Lymans Ltd., Montreal.	" "
" 14	" "	59159	Graham Bros., Queen St., Ottawa.	3 "	75	The Canada Paint Co., Montreal.	" "
Aug. 15	" "	59160	Graham Bros., Queen St., Ottawa.	1 1/2 "	25	May & Baker, Battersea, London, Eng.	" "

DISTRICT OF KINGSTON—

June 23	Arsenate of Lead.	57350	G. W. Mahood, Kingston.	5 tins.	75	The Canada Paint Co., Montreal.	
" 23	" "	57351	W. A. Mitchell, Kingston.	3 jars.	90	National Drug Co., London, Ont.	
" 25	" "	57352	A. Geen, Belleville....	3 lbs.	75		Drug Trading Co. Toronto.
" 25	" "	57353	H. R. Smith, Cobourg.	3 tins.	1.05	Sanderson & Peardy Co., Toronto.	
" 26	" "	57354	McDermid & Jury, Peterboro,	3 bots.	75	Canada Paint Co., Montreal.	

LEAD ARSENATE.

Inspector's Report, (Is not an expression of Opinion.)	Results of Analysis.										Remarks and Opinion of the Chief Analyst.
	Moisture in Sample as received.	Results calculated on the Dry Sample.						Percentage Weights in Original Sample.		Analysis made on original package.	
		Total Arsenic as As ₂ O ₃ .	Total Lead as Pb. O.	Water Soluble Solids.	Water Soluble Arse- nic as As ₂ O ₃ .	Water Soluble Lead as Pb. O.	Water Soluble Im- purities.	Arsenic (As ₂ O ₃).	Lead (Pb. O.)		
								No. of Sample.			

J. J. COSTIGAN, ACTING INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
.....	30.02	25.88	70.09	2.00	12.00	18.00	1.70	15.85	42.74	Yes.	58051
.....	40.45	25.88	71.19	2.00	24.00	36.00	1.40	15.41	42.40	Yes.	58052
.....	39.62	25.88	71.37	2.00	12.00	0.00	1.88	15.79	43.00	Yes.	58053

J. A. RICKEY, INSPECTOR.

Labelled, Neutral, C. P. Arsenate of Lead.	43.35	25.88	71.74	1.50	48.00	18.00	0.84	14.66	40.64	Yes.	59151
Guaranteed to con- tain 15% Arsenic Oxide, less, than 50% moisture, less 1/2 of 1% Sol. Ars. Oxide.	43.45	28.75	65.85	1.50	12.00	0.00	1.38	16.26	37.24	No.	59152
.....	44.81	25.88	71.74	2.00	24.00	0.00	1.76	14.27	39.60	No.	59153
Neutral C.P., Ar- senate of Lead.	41.75	25.45	72.11	1.00	12.00	18.00	0.70	16.74	37.68	Yes.	59154
.....	0.15	28.75	68.98	2.50	36.00	0.00	2.14	.....	.....	No.	59155
.....	0.25	27.31	68.61	1.50	48.00	0.00	1.02	.....	.....	No.	59156
.....	0.25	28.03	66.77	2.50	12.00	0.00	2.38	.....	.....	No.	59157
.....	0.25	25.88	71.37	2.00	36.00	36.00	1.28	.....	.....	No.	59158
Neutral C.P., Ar- senate of Lead.	44.33	27.31	71.00	1.00	24.00	0.00	0.76	15.21	39.53	Yes.	59159
.....	0.45	28.75	64.93	3.00	12.00	18.00	2.70	.....	.....	No.	59160

JAS. HOGAN, INSPECTOR.

.....	40.91	25.88	71.74	1.50	48.00	0.00	1.02	15.32	42.47	Yes.	57350
.....	44.45	31.62	65.49	1.00	12.00	0.00	0.88	17.61	36.38	No.	57351
.....	34.74	30.19	68.42	1.50	24.00	36.00	1.10	19.70	44.65	No.	57352
.....	39.69	25.89	72.11	1.00	12.00	18.00	0.70	15.61	43.49	Yes.	57353
.....	41.56	27.31	70.27	1.00	12.00	18.00	0.70	15.96	41.06	Yes.	57354

BULLETIN No. 284—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF KINGSTON—

1913.							
June 26	Arsenate of Lead.	57355	The Warne Drug Co., Peterboro.	3 tins.	75	.....	National Drug Co., Toronto.
" 26	" "	57356	E. L. Payne, Peterboro.	3 bots.	75	Canada Paint Co., Montreal.	.....
" 26	" "	57357	Nugent Drug Co., Peterboro.	3 "	90	The Grasselle.....	.....
" 26	" "	57358	W. Madill, Peterboro.	3 tins.	75	.....	Drug Trading Co. Toronto.

DISTRICT OF TORONTO—

June 23	Arsenate of Lead.	57460	Jury & Gregory, Col.-lingwood.	1 lb...	25	.....	Unknown
" 24	" "	57461	H. Cooke & Co., Orillia.	1 "	25	.....	Lyman Bros. & Co., Ltd., Toronto.
" 25	" "	57462	Wm. Crossland, Barrie.	3 pkgs	90	.....	The Drug Trading Co., Ltd., Toronto.
" 26	" "	57463	D. Pettit, Pickering.	1½ lb.	30	.....	Nat. Drug & Chem. Co., Ltd., Toronto.
" 27	" "	57464	G. M. Rice, Whitby.	1½ "	20	The Sherwin-Williams Paint Co., Toronto.	.....
July 8	" "	57465	Sanderson, Percy Co., 65 Adelaide St., Toronto.	2 "	40	Canada Paint Co., Montreal.	.....
" 8	" "	57466	The T. Eaton Co., Ltd., Toronto.	3 pkgs	51	Interstate Chem. Co., Jersey City, N.J.	.....

DISTRICT OF HAMILTON—

July 9	Arsenate of Lead.	58825	Parke & Parke, 17 Market Square, Hamilton.	3 tins.	60	Grasselli Chem. Co., Hamilton.	.....
" 9	" "	58826	Grasselli Chem. Co., Ottawa St., Hamilton.	3 jars.	54	Vendors.....	.....
" 10	" "	58827	Niagara Brand Spray Co., Brant St., Burlington.	3 kegs	4.20	Merimac Chem. Co., Boston, Mass.	.....

LEAD ARSENATE.

Inspector's Report. (Is not an expression of Opinion.)	Results of Analysis.										Remarks and Opinion of the Chief Analyst.
	Moisture in Sample as received.	Results calculated on the dry Sample.						Percentage Weights in Original Sample.		Analysis made on original package.	
		Total Arsenic as $As_2 O_3$.	Total Lead as Pb. O.	Water Soluble Solids.	Water Soluble Arsenic as $As_2 O_3$.	Water Soluble Lead as Pb. O.	Water Soluble Impurities.	Arsenic ($As_2 O_3$).	Lead (Pb. O.)		
No. of Sample.											

Concluded.

	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
.....	43.06	31.62	66.04	2.50	48.03	61.66	18.01	37.61	No.	57355		
.....	33.79	26.53	71.96	1.50	12.01	18.20	17.04	46.21	Yes.	57356		
.....	38.45	27.31	70.27	2.00	12.00	1.88	16.81	43.25	Yes.	57357		
.....	43.67	28.75	68.80	2.50	27.03	61.90	16.23	38.83	Yes.	57358		

H. J. DAGER, INSPECTOR.

.....	0.15	28.75	65.85	2.50	24.01	2.08	.....	.....	No.	57460		
Grasselli Arsenate of Lead.	0.20	25.88	68.24	4.00	48.03	3.16	.....	.....	No.	57461		
Neutral Arsenate of Lead.	38.27	25.88	70.82	2.00	12.01	1.70	15.98	43.72	Yes.	57462		
.....	46.14	30.19	66.96	1.50	12.00	1.38	16.26	36.06	No.	57463		
.....	44.46	25.88	71.74	2.00	12.03	1.52	14.38	39.85	No.	57464		
.....	32.21	25.88	70.27	1.00	12.00	0.88	17.55	47.64	No.	57465		
Key Brand. Contains 15 1/2 p.c. arsenic oxide.	45.40	30.19	64.56	1.00	12.00	0.88	16.49	35.25	Yes.	57466		

D. M. CAMERON, INSPECTOR.

.....	44.44	31.62	66.04	2.00	12.00	1.88	17.56	36.69	Yes.	58825		
.....	47.93	28.75	67.69	1.00	12.03	0.52	14.96	35.25	Yes.	58826		
.....	38.55	28.75	62.91	2.00	12.00	1.88	17.67	38.66	Yes.	58827		

BULLETIN No. 284

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF WINDSOR—

1913.							
July 3	Arsenate of Lead.	54847	P. Bawden, Ridge town.	3 pkgs	60		Nat. Drug Co., Hamilton.
" 7	"	54849	A. I. McCall & Co., Chatham, Ont.	3 "	60		Chemical Laboratory, Toronto.
" 11	"	54878	Dardi & Hunter, London, Ont.	3 "	75	Canada Paint Co., Montreal.	

DISTRICT OF ROCKY MOUNTAINS—

July 3	Arsenate of Lead.	49917	C. R. Macdonald, Revelstoke, B.C.	3 lb.	40	Merimac Chem. Co., Boston, Mass.	
" 3	"	49918	Walter Bewa, Revelstoke, B.C.	3 lb.	55	Vreeland Chem. Co., New York.	
" 16	"	49920	E. W. Hazlewood, Trail, B.C.	3 lb.	45	" "	
" 16	"	49932	Goodeve Bros., Rossland, B.C.	3 lb.	40	" "	
" 28	"	49940	Poole Drug Co., Nelson, B.C.	3 tins.	75	The B.C. Soap Wks., Vancouver, B.C.	
" 28	"	49943	Rutherford Drug Co., Nelson, B.C.	3 "	45	Vreeland Chem. Co., New York.	

DISTRICT OF VANCOUVER—

Aug. 8	Arsenate of Lead.	54911	Dr. Hepworth, Steveston, B.C.	3 pkgs	90		J. A. Teeporten, Vancouver.
" 14	"	54912	Nat. Drug & Chem. Co., Vancouver, B.C.	3 "	45	Vreeland Chem. Co., New York.	

DISTRICT OF VICTORIA—

July 28	Arsenate of Lead.	57632	Wm. Jackson & Co., 1411 Douglas St., Victoria.	1 lb.	35	Unknown	Unknown
" 29	"	57635	Nat. Drug & Chem. Co., Ltd., 519 Yates St., Victoria.	3 1/2 "	150	Vreeland Chem. Co., New York.	
" 29	"	57636	The Victoria Chem. Co., Ltd., 7 Dallas Road, Victoria.	3 "	75	Nobel, Glasgow, Scot.	
" 29	"	57637	W. J. Pendray & Sons, Ltd., Laurel Point, Victoria.	3 "	60	Vendors	

LEAD ARSENATE.

Inspector's Report. (Is not an expression of Opinion).	Results of Analysis.										Remarks and Opinion of the Chief Analyst.
	Moisture in Sample as Received.	Results Calculated on the Dry Sample.						Percentage Weights in Original Sample.		Analysis made on Original Package.	
		Total Arsenic as $As_2 O_3$.	Total Lead as $Pb. O$.	Water Soluble Solids.	Water Soluble Arsenic as $As_2 O_3$.	Water Soluble Lead as $Pb. O$.	Water Soluble Impurities.	Arsenic ($As_2 O_3$).	Lead $Pb. O$.		
									No. of Sample.		

JNO. TALBOT, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
.....	43.70	25.88	70.45	1.50	12.00	0.00	1.38	14.56	39.67	Yes.	54847
.....	41.67	25.88	58.80	1.00	12.00	0.00	3.88	15.09	40.13	Yes.	548
.....	39.91	25.88	69.35	1.00	12.00	0.00	0.88	15.55	41.67	Yes.	54878

THOS. PARKER, INSPECTOR.

.....	0.25	27.31	67.14	1.50	12.00	0.36	1.02	.....	.....	No.	49917
.....	0.20	23.75	65.12	4.00	60.00	0.54	2.86	.....	.....	No.	49918
.....	0.15	31.62	65.12	1.00	12.00	0.18	0.70	.....	.....	No.	49920
.....	0.20	30.19	64.75	2.50	12.00	0.00	2.38	.....	.....	No.	49932
.....	38.47	28.75	70.09	1.00	12.00	0.18	0.70	17.69	43.14	Yes.	49940
.....	0.15	28.75	65.12	2.00	24.00	0.18	1.58	.....	.....	No.	49943

J. F. POWER, INSPECTOR.

.....	0.20	31.62	66.41	2.00	24.00	0.00	1.76	.....	.....	No.	54911
.....	0.15	32.34	66.22	1.50	12.00	0.18	1.20	.....	.....	No.	54912

D. O'SULLIVAN, INSPECTOR.

.....	26.96	29.47	66.96	3.50	12.00	0.00	3.38	19.73	48.91	No.	57632
Electro	0.15	31.62	64.93	0.50	12.00	0.18	0.20	.....	.....	No.	57635
.....	44.69	28.75	68.80	2.50	36.00	0.18	1.96	15.90	38.06	Yes.	57636
.....	33.05	25.38	68.80	6.00	12.00	0.36	5.52	17.25	46.06	No.	57637